

Amendments to the Specification

Page 6, please rewrite the paragraph commencing at line 19, as follows:

-- Once the speech recognition engine recognizes a voice input, data representing the voice input may be processed by a voice application 175 operated by a general computing system. The voice application 175 is illustrative of a variety of software applications containing sufficient computer executable instructions which, when executed by a computer, provide services to a caller or a user based on digitized voice input from the caller or user passed through the speech recognition engine 150.--

Page 6, please rewrite the paragraph commencing at line 25, as follows:

--In a typical operation, a voice input is received by the speech recognition engine 150 from a caller via the wireless/wireline telephony system 120 requesting some type of service, for example, general call processing or other assistance. Once the initial request is received by the speech recognition engine 150 and is passed as data to the voice application 175, a series of prompts may be provided to the user or caller to request additional information from the user or caller. Each responsive voice input by the user or caller is recognized by the speech recognition engine 150 and is passed to the voice application 175 for processing according to the request or response from the user or caller. Canned responses to the caller may be provided by the voice application 175 or responses may be generated by the voice application 175 on the fly by obtaining responsive information from a memory storage device followed by a conversion of the responsive information from text-to-speech, followed by playing the text-to-speech response to the caller or user.--

Page 8, please rewrite the paragraph commencing at line 1, as follows:

--The wireless/wireline telephony system 120 is illustrative of a wired public switched telephone network accessible via a variety of wireline devices such as the wireline telephone 100. The telephony system 120 is also illustrative of a wireless network such as a cellular telecommunications network and may comprise a number of wireless network components such as mobile switching centers for connecting

communications from wireless subscribers from wireless telephones 110 to a variety of terminating communications stations. [[A]] As should be understood by those skilled in the art, the wireless/wireline telephony system 120 is also illustrative of other wireless connectivity systems including ultra wideband and satellite transmission and reception systems where the wireless telephone 110 or other mobile digital devices, such as personal digital assistants, may send and receive communications directly through varying range satellite transceivers.--

Page 11, please rewrite the paragraph commencing at line 26, as follows:

--At block 310, the main processor directs the grammar loader to load a yes/no grammar and directs the prompt player to play the output from the speech recognition engine 150 back to the user, converting the recognized characters from a digital format to an audio format. The prompt player then asks the user to verify that the output from the speech recognition engine 150 is correct. That is, if the user entered alphabetic characters such as "J, O, N, E and S" to spell the name "Jones," the speech recognition engine will digitize the voice input from the user and generate a digital output. The output is played back to the user by the prompt player to ask the user if the output is correct. At block 312, if the user entered the characters by voice alphabetic character input and the output from the speech recognition engine 150 is correct, the method proceeds to block 395 and ends.--

Listing of the Claims:

Please replace the original claim set with the following replacement claim set.

Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application:

1. (Currently Amended) A method of improving alphabetic speech recognition by a speech recognition engine, comprising:

receiving a first spoken alphabetic character input comprising plural alphabetic characters from a user;

passing the first spoken alphabetic character input received from the user through a speech recognition engine;

at the speech recognition engine, recognizing the first spoken alphabetic character input received from the user;

querying the user for verification that the recognized alphabetic character input is the same as the first spoken alphabetic character input received from the user;

if the recognized alphabetic character input is not the same as the first spoken alphabetic character input received from the user, receiving from the user a dual tone multi-frequency (DTMF) key tone for each of ~~one or more~~ the first spoken alphabetic characters received from the user; and

if one alphabetic character string associated with the DTMF key tones received from the user matches the first spoken alphabetic character input received from the user, designating the one alphabetic character string associated with the DTMF key tones received from the user that matches the first spoken alphabetic character input received from the user as a correct alphabetic character input.

2. (Currently Amended) The method of Claim 1, prior to receiving [[a]] the first spoken alphabetic character input from the user, prompting a user to enter by one or more spoken alphabetic characters; and

loading into the speech recognition engine a grammar definition defining a set of alphabetic characters acceptable to the speech recognition engine as responsive to the prompt to the user to enter by one or more alphabetic characters.

3. (Currently Amended) The method of Claim 2, whereby wherein the set of alphabetic characters includes the characters a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, and z.

4. (Currently Amended) The method of Claim 3, whereby wherein the alphabetic character input received from the user includes one or more alphabetic characters from the set of alphabetic characters of Claim 3.

5. (Currently Amended) The method of Claim 4, whereby wherein the set of alphabetic characters further includes phonetic versions of the alphabetic characters of Claim 4.

6. (Currently Amended) The method of Claim 5, whereby wherein the alphabetic character input received from the user includes ~~one or more plural~~ alphabetic characters from the set of alphabetic characters of Claim 5.

7. (Currently Amended) The method of Claim 6, whereby wherein the alphabetic character input received from the user includes one or more combinations of alphabetic characters from the set of alphabetic characters of Claim 6.

8. (Currently Amended) The method of Claim 2, whereby wherein the set of alphabetic characters includes numerals associated with dual tone multi-frequency (DTMF) key tones from a telephone keypad.

9. (Currently Amended) The method of Claim 8, whereby wherein the alphabetic character input received from the user includes one or more DTMF key tones.

10. (Currently Amended) The method of Claim 9, whereby wherein numerals associated with DTMF key tones of [[a]] the telephone keypad include 1, 2, 3, 4, 5, 6, 7, 8, 9.

11. (Currently Amended) The method of Claim 10, whereby wherein the set of alphabetic characters includes all alphabetic characters associated with the DTMF key tones.

12. (Currently Amended) The method of Claim 1, wherein prior to querying the user for verification that the recognized alphabetic character input is the same as the first spoken alphabetic character input received from the user, converting the recognized alphabetic character input from a digital format to an audio format.

13. (Currently Amended) The method of Claim 12, whereby wherein querying the user for verification that the recognized alphabetic character input is the same as the first spoken alphabetic character input received from the user includes presenting the audio formatted recognized character input to the user.

14. (Currently Amended) The method of Claim 13, whereby wherein the audio formatted recognized alphabetic character input is presented to the user telephonically.

15. (Currently Amended) The method of Claim 1, wherein prior to receiving from the user [[a]] the DTMF key tone for each of the one or more plural spoken alphabetic characters input by the user:

prompting the user for [[a]] the DTMF key tone for each of the one or more plural spoken alphabetic characters input by the user; and

querying the user to verify that the DTMF key tones received from the user are correct.

16. (Currently Amended) The method of Claim 1, wherein prior to designating the alphabetic character string associated with the DTMF key tones received from the user as a correct alphabetic character input requested from the user:

determining whether an alphabetic character string associated with the DTMF tones received from the user sounds like the first spoken alphabetic character input received from the user; and

querying the user to determine whether the alphabetic character string associated with the DTMF key tones received from the user match the first spoken alphabetic character input received from the user.

17. (Original) The method of Claim 16, further comprising:

if more than one alphabetic character string is determined to be associated with the DTMF key tones received from the user that sound like the first spoken alphabetic character input received from the user,

receiving a second spoken input of the alphabetic character input from the user;

comparing the second spoken alphabetic character input received from the user to each of the more than one alphabetic character strings determined to be associated with the DTMF key tones received from the user that sound like the first spoken alphabetic character input received from the user; and

if the second spoken alphabetic character input received from the user matches one of the more than one alphabetic character strings determined to be associated with the DTMF key tones received from the user, designating the alphabetic character string associated with the DTMF key tones that matches the second spoken alphabetic character input received from the user as a correct alphabetic character.

18. (Currently Amended) A method of improving alphabetic speech recognition by a speech recognition engine, comprising:

receiving an alphabetic character input comprising plural alphabetic characters from a user via DTMF key tone selection;

determining one or more alphabetic character combinations that are represented by the DTMF key tone input received by the user;

receiving a first spoken alphabetic character input from the user by speech input;

passing the first spoken alphabetic character input received from the user through a speech recognition engine;

at the speech recognition engine, converting the first spoken alphabetic character input from an audio format to a digital format and recognizing the first spoken alphabetic character input received from the user; and

if the first spoken alphabetic character input received by the user matches one of the one or more alphabetic character combinations that are represented by the DTMF key tone input received from the user, designating the one of the one or more alphabetic character combinations that are represented by the DTMF key tone input received from the user that matches the first spoken alphabetic character input received from the user as a correct alphabetic character input.

19. (Currently Amended) The method of Claim 18, whereby wherein the alphabetic character combinations that are represented by the DTMF key tone input received from the user may include one or more phonetic versions of alphabetic characters that are represented by the DTMF key tone input received by the user.

20. (Currently Amended) A system for improving alphabetic speech recognition by a speech recognition engine, comprising:

a speech recognition engine operative

to receive a first spoken alphabetic character input comprising plural spoken alphabetic characters from a user;

to convert the first spoken alphabetic character input from an audio format to a digital format and to recognize the first spoken alphabetic character input received from the user;

to query the user for verification that the recognized alphabetic character input is the same as the first spoken alphabetic character input received from the user;

to receive from the user a dual tone multi-frequency (DTMF) key tone for each of ~~one or more~~ the plural first spoken alphabetic characters received from the user, if the recognized alphabetic character input is not the same as the first spoken alphabetic character input received from the user; and

to designate the one alphabetic character string associated with the DTMF key tones received from the user that matches the first spoken alphabetic character input received from the user as a correct alphabetic character input if one alphabetic character string associated with the DTMF key tones received from the user matches the first spoken alphabetic character input received from the user.

21. (Currently Amended) The system of Claim 20, wherein prior to designating the alphabetic character string associated with the DTMF key tones received from the user as a correct alphabetic character input requested from the user, the speech recognition engine being further operative:

to determine whether an alphabetic character string associated with the DTMF tones received from the user sounds like the first spoken alphabetic character input received from the user; and

to query the user to determine whether the alphabetic character string associated with the DTMF key tones received from the user match the first spoken alphabetic character input received from the user.

22. (Original) The system of Claim 21, the speech recognition engine being further operative:

to receive a second spoken input of the alphabetic character input from the user if more than one alphabetic character string is determined to be associated with the DTMF key tones received from the user that sound like the first spoken alphabetic character input received from the user;

to compare the second spoken alphabetic character input received from the user to each of the more than one alphabetic character strings determined to be associated with the DTMF key tones received from the user that sound like the first spoken alphabetic character input received from the user; and

to designate the alphabetic character string associated with the DTMF key tones that matches the second spoken alphabetic character input received from the user as a correct alphabetic character if the second spoken alphabetic character input received from the user matches one of the more than one alphabetic character strings determined to be associated with the DTMF key tones received from the user.

23. (Currently Amended) A method of improving alphabetic speech recognition by a speech recognition engine, comprising:

receiving a first spoken alphabetic character input comprising plural spoken alphabetic characters from a user;

passing the first spoken alphabetic character input received from the user through a speech recognition engine;

at the speech recognition engine, recognizing the first spoken alphabetic character input received from the user;

querying the user for verification that the recognized alphabetic character input is the same as the first spoken alphabetic character input received from the user;

if the recognized alphabetic character input is not the same as the first spoken alphabetic character input received from the user, receiving from the user a keypad entry for each of ~~one or more~~ the first spoken alphabetic characters received from the user; and

if one alphabetic character string associated with the keypad entry received from the user matches the first spoken alphabetic character input received from the user, designating the one alphabetic character string associated with the keypad entry received from the user that matches the first spoken alphabetic character input received from the user as a correct alphabetic character input.